

ABSTRACT OF THE DISCLOSURE

1 In a hands-free mode of speech communication, a loudspeaker
2 produces acoustic energy of a distant signal from a far-end talker and a
3 microphone produces a near-end signal containing a speech component
4 representing the speech activity of a near-end talker or an acoustic echo
5 component, or both. An echo replica is produced from the distant signal and
6 a residual echo representing the difference between the near-end signal and
7 the echo replica. The residual echo is used as a feedback signal to produce
8 the echo replica. Using one of the near-end signal and the residual echo as a
9 first input signal and the echo replica as a second signal, an estimate of the
10 acoustic echo is produced when the speech activity of the near-end talker is
11 low or zero. Using the acoustic echo estimate, the spectrum of the first input
12 signal is shaped to produce a local signal for transmission to the far-end
13 talker.